

WHAT IS CLAIMED IS:

1. An electroluminescence device comprising:
an anode,
a cathode and
an organic light emitting layer put between the anode and
the cathode in which
the anode contains a metal belonging to the group V or
the group VI of the periodical table at least to a portion in
contact with the organic light emitting layer.
2. An electroluminescence device as claimed in claim 1,
wherein
the metal includes chromium, molybdenum, tungsten,
tantalum or niobium.
3. An electroluminescence device as claimed in claim 1,
wherein the work function of the metal is 4.8 eV or lower.
4. An electroluminescence device as claimed in claim 1,
wherein the anode has a reflectance of 40% or higher.
5. An electroluminescence device as claimed in claim 1,
wherein emission light from the organic light emitting layer
is emitted mainly from the side of the cathode.

6. An electroluminescence device as claimed in claim 1, wherein the anode comprises an alloy.
7. An electroluminescence device as claimed in claim 1, wherein the organic light emitting layer has a hole transporting layer for transporting holes injected from the anode.
8. An electroluminescence device as claimed in claim 1, wherein the cathode comprises a layer consisting of a metal and a transparent material.
9. An electroluminescence device as claimed in claim 1, wherein the cathode comprises MgAg.
10. An electroluminescence device comprising the following constitutions:
- a substrate,
 - an anode formed on the substrate,
 - an organic light emitting layer formed on the anode and
 - a cathode formed on an organic light emitting layer, in
- which
- the anode contains a metal belonging to the group V or
 - group VI of the periodical table to at least a portion in contact

with the organic light emission device.

11. An electroluminescence device as claimed in claim 10, wherein the metal is chromium, molybdenum, tungsten, tantalum or niobium.

12. An electroluminescence device as claimed in claim 10, wherein the metal has a work function of 4.8 eV or lower.

13. An electroluminescence device as claimed in claim 10, wherein the anode has a reflectance of 40% or higher.

14. An electroluminescence device as claimed in claim 10, wherein emission light from the organic light emitting layer is mainly emitted from the side of the cathode.

15. An electroluminescence device as claimed in claim 10, wherein the anode comprises an alloy.

16. An electroluminescence device as claimed in claim 10, wherein the organic light emitting layer has a hole transporting layer for transporting holes injected from the anode.

17. An electroluminescence device as claimed in claim 10,

wherein the cathode comprises a layer composed of a metal and a transparent material.

18. An electroluminescence device as claimed in claim 10, wherein the cathode comprises MgAg.

315/1693 claims 19-50
19. An electroluminescence device comprising:

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scanning lines for selecting pixels,
data lines provided with luminance information for driving pixels,

a first transistor connected at a control terminal with the scanning lines,

a second transistor connected at a control terminal with the first transistor, and

a light emitting device connected with the second transistor in which

the light emitting device at least has an organic light emitting layer, a first electrode providing holes to the organic light emitting layer and a second electrode providing electrons to the organic light emitting layer, and

the first electrode contains a metal belonging to the group V or group VI of the periodical table to at least a portion in contact with the organic light emitting layer.

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20. An electroluminescence device as claimed in claim 19, wherein the first transistor and the second transistor are field effect transistors and a capacitance is connected with the control terminal of the second control terminal.

21. An electroluminescence device as claimed in claim 19, wherein the scanning lines and the data lines cross substantially vertical to each other.

22. An electroluminescence device as claimed in claim 19, wherein the metal is chromium, molybdenum, tungsten, tantalum or niobium.

23. An electroluminescence device as claimed in claim 19, wherein the metal has a work function of 4.8 eV or lower.

24. An electroluminescence device as claimed in claim 19, wherein the first electrode has a reflectance of 40% or higher.

25. An electroluminescence device as claimed in claim 19, wherein light emission from the organic light emitting layer is emitted from the side of the second electrode mainly.

26. An electroluminescence device as claimed in claim 19,

wherein the first electrode comprises an alloy.

27. An electroluminescence device as claimed in claim 19, wherein the organic light remitting layer has a hole transporting layer for transporting holes injected from the first electrode.

28. An electroluminescence device as claimed in claim 19, wherein the second electrode is constituted with a layer comprising a metal and a transparent material.

29. An electroluminescence device as claimed in claim 19, wherein the second electrode comprises MgAg.

30. An active matrix type electroluminescence device comprising:

scanning lines for selecting pixels,

data lines provided with luminance information for driving the pixels,

a first transistor connected at a control terminal with the scanning lines,

a second transistor connected at a control terminal with the first transistor, and

a light emitting device connected with the second transistor in which

the light emitting device at least has an organic light emitting layer, a first electrode providing holes to the organic light emitting layer and a second electrode providing electrons to the organic light emitting layer, and

the first electrode contains a metal belonging to the group V or group VI of the periodical table to at least a portion in contact with the organic light emitting layer.

31. An active matrix type electroluminescence device as claimed in claim 30, wherein the first transistor and the second transistor are field effect transistors and connected at the second control terminals with the capacitor.

32. An active matrix type electroluminescence device as claimed in claim 30, wherein the scanning lines and the data lines cross substantially vertically to each other.

33. An active matrix type electroluminescence device as claimed in claim 30, wherein the metal is chromium, molybdenum, tungsten, tantalum or niobium.

34. An active matrix type electroluminescence device as claimed in claim 30, wherein the metal has a work function of 4.8 eV or lower.

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35. An activematrix type electroluminescence device as claimed in claim 30, wherein the first electrode has a reflectance of 40% or higher.

36. An activematrix type electroluminescence device as claimed in claim 30, wherein light emission from the organic light emitting layer is emitted mainly from the side of the second electrode

37. An activematrix type electroluminescence device as claimed in claim 30, wherein the first electrode comprises an alloy.

38. An activematrix type electroluminescence device as claimed in claim 30, wherein the organic light emitting layer has a hole transporting layer for transporting holes injected from the first electrode.

39. An activematrix type electroluminescence device as claimed in claim 30, wherein the second electrode is constituted with a layer comprising a metal and a transparent material.

40. An activematrix type electroluminescence device as claimed in claim 30, wherein the second electrode comprises MgAg.

41. A display device comprising:

scanning lines for selecting pixels, and

data lines disposed substantially vertically relative to the scanning lines and provided with luminance information for driving the pixels in which

the pixel at least comprises an organic electroluminescence device having an anode containing a metal belonging to the group V or group VI of the periodical table to a portion in contact with the organic light emitting layer, and a cathode disposed at a position opposing to the anode, a first active element controlled by the scanning lines and having a function of intaking luminance information provided from the data lines and a second active element having a function of controlling the current supplied to the organic electroluminescence device in accordance with the intaken luminance information,

the luminance information is taken into the pixels by applying electric signals in accordance with the luminance information to the data lines in a state where the data lines are selected, the luminance information taken in the pixel is maintained to the pixel even after the scanning line becomes no more selected, and the organic electroluminescence device maintains light emission at a luminance according to the luminance information.

42. A display device as claimed in claim 41, wherein the first transistor and the second transistor are field effect transistors and a capacitance is connected with the control terminal with the second control terminal.

43. A display device as claimed in claim 41, wherein the metal is chromium, molybdenum, tungsten, tantalum or niobium.

44. A display device as claimed in claim 41, wherein the metal has a work function of 4.8 eV or lower.

45. A display device as claimed in claim 41, wherein the first electrode has a reflectance of 40% or higher .

46. A display device as claimed in claim 41, wherein light emission from the organic light emitting layer is emitted mainly from the side of the cathode.

47. A display device as claimed in claim 41, wherein the anode comprises an alloy.

48. A display device as claimed in claim 41, wherein the organic light emitting layer has a hole transporting layer for transporting holes injected from the first anode.

49. A display device as claimed in claim 41, wherein the anode is constituted with a layer comprising a metal and a transparent material.

50. A display device as claimed in claim 41, wherein the second electrode comprises MgAg.

51. A method of manufacturing an electroluminescence device comprising the following steps:

a step of forming a first electrode having a metal belonging to the group V or the group VI of the periodical table on a substrate:

a step of forming an organic light emitting layer so as to be in contact with the metal and

a step of forming a second electrode on the organic light emitting layer.

52. A manufacturing method as claimed in claim 51, wherein the first electrode is in a tapered type.

53. A manufacturing method as claimed in claim 51, wherein the metal is chromium, molybdenum, tungsten, tantalum or niobium.

54. A manufacturing method as claimed in claim 51, wherein

the metal has a work function of 4.8 eV or lower.

55. A manufacturing method as claimed in claim 51, wherein the first electrode has a reflectance of 40% or higher.

56. A manufacturing method as claimed in claim 51, wherein first electrode has a higher reflectance than the second electrode.

57. A manufacturing method as claimed in claim 51, wherein the first electrode comprises an alloy.

58. A manufacturing method as claimed in claim 51,, wherein the organic light remitting layer has a hole transporting layer for transporting holes injected from the first electrode.

59. A manufacturing method as claimed in claim 51, wherein the second electrode is constituted with a layer comprising a metal and a transparent material.

60. A method of manufacturing an electroluminescence device comprising the following steps:

a step of forming a first electrode having a metal belonging to the group V or group VI of the periodical table on a substrate,

66. A manufacturing method as claimed in claim 60, wherein the first electrode comprises an alloy.

67. A manufacturing method as claimed in claim 60,, wherein the organic light remitting layer has a hole transporting layer for transporting holes injected from the first electrode.

68. A manufacturing method as claimed in claim 60, wherein the second electrode is constituted with a layer comprising a metal and a transparent material.

69. A method of manufacturing an electroluminescence device comprising the following steps:

a step of forming a gate electrode on a substrate,

a step of forming a gate insulative film on the gate electrode,

a step of forming a semiconductor layer on the gate insulative film,

a step of forming an insulative film on the semiconductor layer,

a step of forming a first electrode having a metal belonging to the group V or group VI of the periodical table on the insulative film,

a step of forming an organic light emitting layer so as to be in contact with the metal and

a step of forming a second electrode on the organic light emitting layer.

70. A manufacturing method as claimed in claim 69, wherein the first electrode is in a tapered type.

71. A manufacturing method as claimed in claim 69, wherein the metal is chromium, molybdenum, tungsten, tantalum or niobium.

72. A manufacturing method as claimed in claim 69, wherein the metal has a work function of 4.8 eV or lower.

73. A manufacturing method as claimed in claim 69, wherein the first electrode has a reflectance of 40% or higher.

74. A manufacturing method as claimed in claim 69, wherein the first electrode has a higher reflectance than the second electrode.

75. A manufacturing method as claimed in claim 69, wherein the first electrode comprises an alloy.

76. A manufacturing method as claimed in claim 69,, wherein the organic light emitting layer has a hole transporting layer for transporting holes injected from the first electrode.

77. A manufacturing method as claimed in claim 69, wherein the second electrode is constituted with a layer comprising a metal and a transparent material.

78. A manufacturing method as claimed in claim 69, wherein the substrate comprises glass and the gate insulative film has a thickness less than that of the insulative film described above.

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